



Form 1	PTO	-1449 Modified	Docket No. UPN-4296/P2957	Application No. 10/706,799			
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant Joel S. Karp, et al.				
U.S. Department of Commerce Patent and Trademark Office			Filing Date November 12, 2003	Group 3736 2878			
			Confirmation No. 7178				
O	CHE	R DOCUMENTS (Includ	ing Author, Title, Date,	Pertinent Pages, Etc.)			
08	5		nization of a fully 3D single. & Biol., 2004, 49, 2577	gle scatter simulation algorithm for -2598			
CS	6						
CS	7	Allemand, R., et al., "Potential advantages of a cesium fluoride scintillator for a time of-flight positron camera," J. Nucl. Med., 1980, 21, 153-155					
ĆS	8	Bendriem, B., et al. "A to system using time-of-flig 1986, 10(2), 287-295	Bendriem, B., et al. "A technique for the correction of scattered radiation in a PET system using time-of-flight information," J. of Computer Assisted Tomography,				
CS	9	Budinger, T.F., "Time-of	f-flight positron emission ucl. Med., 1983, 24(1), 73	tomography: status relative to -78			
CS.	10	Casey, M.E., et al., "A m	ulticrystal two dimension	al BGO detector system for as on Nuclear Science, 1986, 33(1),			
CS.	11	and round photomultiplic 42(4), 1064-1068	er tubes," IEEE Transacti	or modules employing rectangular ons on Nuclear Science, 1995,			
CS	12	Daube-Witherspoon, M.1 suitable for volume ECT 61-66	," IEEE Transactions on	age space reconstruction algorithm Medical Imaging, 1986, MI-5(2),			
CS	13	likelihood algorithm with Transactions on Nuclear	Daube-Witherspoon, M.E., et al., "Application of the row action maximum likelihood algorithm with spherical basis functions to clinical PET imaging," <i>IEEE Transactions on Nuclear Science</i> , 2001, 48(1), 24-30				
CS	14	Freifelder, R., et al., "De	sign and performance of ouclear Science, 1994, 41(he HEAD PENN-PET scanner,"			
EXAMINER	1	XXX		SIDERED 10/13/05			
				© 2004 WW			

Form PTO-1449 Modified		Docket No. UPN-4296/P2957	Application No. 10/706,799				
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)		Applicant Joel S. Karp, et al.					
U.S. Department of Commerce Patent and Trademark Office		Filing Date November 12, 2003	Group 3736 28 78				
•		Confirmation No. 7178					
O'	ГНЕІ	R DOCUMENTS (Includ	ing Author, Title, Date, 1	Pertinent Pages, Etc.)			
CS	15	Haynor, D.R., et al., "A scheme for accidental coincidence correction in time-of-flight positron tomography: theory and implementation," <i>IEEE Transactions on Nuclear Science</i> , 1988, 35(1), 753-756					
CS	16	Ishibashi, H., et al., "Cerium doped GSO scintillators and its application to position sensitive detectors," <i>IEEE Trans. Nucl. Sci.</i> , 1989, 36(1), 170-172					
B	17	Med. Biol., 30(7), 1985,	Karp, J.S., et al., "Performance of a position-sensitive scintillation detector," Phys. Med. Biol., 30(7), 1985, 643-655				
Œ	18	Phys. Med. Biol., 1995 , 4	10, 929-944	maging PET with a ¹³⁷ Cs source,"			
<i>C</i> 8	19	gadolinium oxyorthosilio	Karp, J.S., et al., "Performance of a brain PET camera based on anger-logic gadolinium oxyorthosilicate detectors," J. of Nuclear Med., 2003, 44(8), 1340-1349				
CES	20	PET scanner," J. of Nucl.	ear Med., 1997, 38(4), 63(acteristics of the HEAD PENN- 6-643			
(8	21	PENN-PET scanner," IE. 1151	EE Transactions on Nucle	nstruction methods for the HEAD ear Science, 1998, 45(3), 1144-			
(S	22	imaging capability," J. N	lucl. Med., 1990, 31, 617-6	positron tomography with vlume 527			
CS	23	Karp, J.S., et al., "Event digital processing," <i>IEEE</i>	localization in a continuou E, TNS, 1986, 1-5	us scintillation detector using			
CE	24	Karp, J.S., " Is LSO the f	future of PET?," Eur. J. of	Nucl. Med., 2002, 29, 1523-1525			
EXAMINER	$\overline{/}$		DATE CON	SIDERED 10/13/05			
9		1		© 2004 W/W			

Form 1	РТО-	-1449 Modified	Docket No. UPN-4296/P2957	Application No. 10/706,799			
		Applicant Joel S. Karp, et al.					
		nent of Commerce Trademark Office	Filing Date November 12, 2003	Group 3736 2878			
•			Confirmation No. 7178	7			
O'	ГНЕ	R DOCUMENTS (Includ	ling Author, Title, Date,	Pertinent Pages, Etc.)			
CS	25						
CS	26	Kuhn, A., et al., "Design of a lanthanum bromide detector for TOF PET," <i>IEEE Trans. Nucl. Sci.</i> (accepted for publication), 2004, 6 pages					
CS	27	Lewellen, T.K., et al., "Improving the performance of the SP-3000 PET detector modules," <i>IEEE Transactions on Nuclear Science</i> , 1992, 39(4), 1074-1078					
CS	28	Lewellen, T.K., et al., "An experimental evaluation of the effect of time-of-flight information in image reconstructions for the scanditronix/PETT electronics SP-3000 positron emission tomography – preliminary results," <i>IEEE Transactions on Nuclear Science</i> , 1989, 36(1), 1095-1099					
CS	29	Lewellen, T.K., "Time-of-flight PET," Seminars in Nuclear Med., 1998, XXVIII(3), 268-275					
CS	30	Mankoff, D.A., et al., "The high count rate performance of a two-dimensionally position-sensitive detector for positron emission tomography," <i>Phys. Med. Biol.</i> , 1989, 34(4), 437-456					
CS	31	Mazoyer, B., et al., "Physical characteristics of TTV03, a new high spatial resolution time-of-flight positron tomography," <i>IEEE Transactions on Nuclear Science</i> , 1990, 37(2), 778-782					
Co	32	Melcher, C.L., et al., "Cerium-doped lutetium oxyorthosilicate: a fast, efficient new scintillator." <i>IEEE Trans. Nucl. Sci.</i> , 1992, 39, 502-505					
(3	33	Sci., 2000, 47, 965-968	Melcher, C.L., et al., "Scintillation properties of LSO:Ce boules," <i>IEEE Trans. Nucl. Sci.</i> , 2000, 47, 965-968				
CS	34	Moses, W.W., et al., "Ti Nuclear Science, 2003,		ted," IEEE Transactions on			
O	THE	R DOCUMENTS (Includ	ling Author, Title, Date,	Pertinent Pages, Etc.)			

£325

10/13/05

Form l	PTO	-1449 Modified	Docket No. UPN-4296/P2957	Application No. 10/706,799	
J A A		Applicant Joel S. Karp, et al.			
U.S. Department of Commerce Patent and Trademark Office		Filing Date November 12, 2003	Group 3736 2878		
			Confirmation No. 7178		
O	ГНЕ	R DOCUMENTS (Includ	ing Author, Title, Date,	Pertinent Pages, Etc.)	
CZ	35	Moses, W.W., et al., "Pro Transactions on Nuclear		PET using LSO scintillator," <i>IEEE</i> 4-478	
Ó	36	Moses, W.W., "Current trends in scintillator detectors and materials," Nuclear Instruments and Methods in Physics Research A, 2002, 487, 123-128			
(S	37	Moszyński, M., et al., "Energy resolution of scintillation detectors readout with large avalanche photodiodes and photomultipliers," <i>IEEE Trans. Nucl. Sci.</i> , 1998, 45, 472-477			
CS	38	Moszyński, M., et al., "Further study of scintillation counters with BaF ₂ crystals for time-of-flight positron tomography in medicine," Nucl. Instru. Meth., 1984, A226, 534-541			
CoS	39			ing with CsF scintillators in in medicine," Nucl. Instru. Meth.,	
CS	40	Nuclear Instruments and	Methods in Physics Rese	and other Ce doped scintillators," arch, 1996, 372, 51-58	
· CS	41	Moszyński, M., "Inorgan Instruments and Methods	ic scintillation detectors in Physics Research, 200	n γ-ray spectrometry," Nuclear 03, 505, 101-110	
CS.	42	emission tomography," J	. Nucl. Med., 1980, 21, 10	reconstruction in positron 095-1097	
Ġ	43	Mullani, N.A., et al., "Pro Nuclear Science, 1983, N	eliminary results with top IS-30(1), 739-743	pet," IEEE Transactions on	
(S	44	Parra, L., et al., "List-mo	de likelihood: EM algorit	hm and image quality estimation Medical Imaging, 1998, 17(2),	
EXAMINER/	6	02/	DATE CON	SIDERED 10/3/05	
4		7 X		© 2004 WW	

Form l	PTO	-1449 Modified	Docket No. UPN-4296/P295		pplication 0/706,799	
		Applicant Joel S. Karp, et a	1.			
D . 4 4 3 . T		Filing Date November 12, 20)03 G	iroup 736 28	78	
			Confirmation No 7178).		
07	THE	R DOCUMENTS (Includ	ing Author, Title	, Date, Per	tinent Pa	ges, Etc.)
OS	45	Perkins, AE., et al., "Peri scanner," <i>IEEE Transact</i>	ions on Nuclear Sc	cience, 200	3 , <i>50(3)</i> , 3	373-377
45	46	Philippe, E.A., "Some signal processing aspects of time-of-flight positron emission tomography (TOFPET) system implementation," <i>IEEE Trans. Nucl. Sci.</i> , 1983, 30, 715-719				
45 45 45 45	47	Philippe, E.A., et al., "Real-time image reconstruction for time-of-flight positron emission tomography (TOPPET)," <i>IEEE Transactions on Nuclear Science</i> , 1982, NS-29, 524-528				
CS	48	Politte, D.G., "Results of a comparative study of a reconstruction procedure for producing improved estimates of radioactivity distributions in time-of-flight emission tomography," <i>IEEE Transactions on Nuclear Science</i> , 1984, NS-31(1), 614-619				me-of-flight emission <i>3-31(1)</i> , 614-619
C	49	Reader, A.J., "Fast accur volume imaging," Phys.	ate iterative recons Med. Biol., 1998,	struction fo 43, 835-84	or low-stat 6	istics positron
CS	50	Robeson, W., et al., "Sur factors affecting quantita 135-142	tion," <i>IEEE Trans</i>	actions on	Nuclear S	Science, 1993, 40(2),
CS	51	Shah, K.S., et al., "LaBr ₃ Transactions on Nuclear	Science, 2003, 50	(6), 241-24	413	
C	52	Shah, K.S., et al., "LaCl and Methods in Physics	Research, 2003 , 50	<i>05</i> , 76-81		
es	53	Snyder, D.L., et al., "A n system having time-of-fl 3585	ight measurements	s," <i>IEEE Ti</i>	ran. Nucl.	Sci., 1981, 28, 3575-
CS	54	Snyder D.L., et al., "Som tomography-systems hav Nuclear Science, 1982, N	ing time-of-flight	measurem	collection ents," IEE	arrays for emission E Transactions on
EXAMINER/	7	Jen /		E CONSII		10/13/05
CL					© 2	004 WW

Form I	PTO-	1449 Modified	Docket No. UPN-4296/P2957	Application 10/706,799				
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant Joel S. Karp, et al.					
U.S. Department of Commerce Patent and Trademark Office			Filing Date November 12, 2003	Group 3736 2	878			
•			Confirmation No. 7178					
07	THER	R DOCUMENTS (Includ	ling Author, Title, Da	te, Pertinent Pa	iges, Etc.)			
CS	Soussaline, F., et al., "New developments in positron emission tomography instrumentation using the time-of-flight information," in The Metabolism of the Human Brain Studied with Positron Emission Tomography, Greitz, T., et al. (Ed. Raven Press, New York, 1985, 1-12				letabolism of the eitz, T., et al. (Eds.),			
ĆŚ	56	Surti, S., et al., "Optimiz crystals on a continuous	Surti, S., et al., "Optimizing the performance of a PET detector using discrete GSO crystals on a continuous light guide," <i>IEEE Trans. Nucl. Sci.</i> , 2000, 47, 1030-1036					
CS	57	Surti, S., et al., "Imaging characteristics of a 3-dimensional GSO whole-body PET camera." J. of Nuclear Medicine, 2004, 45(6), 1040-1049						
Ó	58	IEEE Transactions on N	Surti, S., et al., "Design evaluation of A-PET: a high sensitivity animal PET camera, IEEE Transactions on Nuclear Science, 2003, 50(5), 1357-1363					
CS	59	Surti, S., et al., "Slotted improve detector perform 2418-2423	mance," <i>IEEE Transac</i>	tions on Nuclear	r Science, 2001 , 48(6),			
CS	60	Transactions on Nuclear	Surti, S., et al., "Evaluation of pixilated NaI(T1) detectors for PET," IEEE Transactions on Nuclear Science, 2003, 50(1), 24-31					
B	61	Surti, S., et al., "Image of Med. Biol. (accepted for	quality assessment of L publication), 2004, 1-	aBr₃ based 3D F 25				
CS	62	Surti, S., et al., "Investig Transactions on Nuclear	sation of lanthanum sci r Science, 2003, 50(3),	ntillators for 3-I 348-354				
CS	63	Ter-Pogossian, M.M., et al., "Super PETT I: A positron emission tomography utilizing photon time-of-flight information," <i>IEEE Transactions on Medical Imaging</i> , 1982. MI-1(3), 179-187						
CS	64	Tomitani, T., "Image red assisted positron emission 4589	Tomitani, T., "Image reconstruction and noise evaluation in photon time-of-flight assisted positron emission tomography," <i>IEEE Trans. Nucl. Sci.</i> , 1981, 28, 4582-					
EXAMINER	K	02/1	DATE C	ONSIDERED	18/13/05			
		Y Y		0	2004 WW			

Form 1	PTO-	-1449 Modified	Docket No. UPN-4296/P2957	Application No. 10/706,799			
		Applicant Joel S. Karp, et al.					
. U.S. Department of Commerce Patent and Trademark Office			Filing Date November 12, 2003	Group 3736 2878			
			Confirmation No. 7178	·			
O'	THE	R DOCUMENTS (Includ	ling Author, Title, Date,	Pertinent Pages, Etc.)			
05	65	van Eijk, C.W.E., "Inorganic scintillators in medical imaging," <i>Phys. Med. Biol.</i> 1989, 47, R85-R106					
CS	66	Appl Phys. Letts., 77(10	van Loef, E.V.D., et al., "High-energy-resolution scintillator: Ce ³⁺ activated LaCl ₃ ," Appl. Phys. Letts., 77(10), 1467-1468				
B	67	Appl. Phys. Letts., 2001,	van Loef, E.V.D., et al., "High-energy-resolution scintillator: Ce ³⁺ activated LaBr ₃ ," <i>Appl. Phys. Letts.</i> , 2001, 79(10), 1573-1575				
CS	68	photomultipliers," Trans	Wong, WH., et al., "An analog decoding BGO block detector using circular photomultipliers," Transactions on Nuclear Science, 1995, 42(4), 1095-1101				
05	69	flight PET." J. of Nuclea	ar Medicine, 1983, 24, 52-	ign optimization of the time-of- 60			
4	70	high intrinsic resolution	haracteristics of small bari time-of-flight positron em r Science, 1984, NS-31(1),	um fluoride (BaF ₂) scintillator for ission tomography," <i>IEEE</i> 381-386			
Ch	71	Yamamoto, M., et al., "I flight assisted positron e Science, 1983, NS-30(1)	Effect of the software coin mission tomography," <i>IEI</i> 1, 711-714	cidence timing window in time-of- EE Transactions on Nuclear			
Co	72	Yamamoto, M., et al., "improvement by an itera 36(1), 998-1002	Yamamoto, M., et al., "Time-of-flight positron imaging and the resolution improvement by an iterative method," <i>IEEE Transactions on Nuclear Science</i> , 1989,				
CS	73	Yamamoto, M., et al., "I utilization of time-of-fli PETT l)," IEEE Transact	Yamamoto, M., et al., "Experimental assessment of the gain achieved by the utilization of time-of-flight information in a positron emission tomography (Super PETT 1)," <i>IEEE Transactions on Medical Imaging</i> , 1982, MI-1(3), 187-192				
CS	74	Yamaya, T., et al., "Hig positron emission tomog	h-resolution image recons graphy," <i>Phys. Med. Biol.</i> ,	2000, 45, 3125-3134			
EXAMINER			DATE CON	· / · · / · · · ·			
7				© 2004 WW			

Form l	Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. UPN-4296/P2957	Application No. 10/706,799	
Cited by Applicant (Use several sheets if necessary)		Applicant Joel S. Karp, et al.		
		Filing Date November 12, 2003	Group 3736 2878	
•		•	Confirmation No. 7178	
O'	THEF		ding Author, Title, Date,	
CS	75	Ziegler, S.I., et al., "Eff time-of-flight detector f Science, 1990, 37(2), 5	for annihilation quanta," IE	ollection on the time resolution of a EEE Transactions on Nuclear
			· .	
		2		
EXAMINER	4		DATE COM	NSIDERED /6/13/05
)		© 2004 WW



Form PTO-1449 Modified	Docket No. Application No. 10/706,799			
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)	Applicant Joel S. Karp, et al.			
U.S. Department of Commerce Patent and Trademark Office	Filing Date November 12, 2003	Group 3736. 287-8		
	Confirmation No. 7178			
OTHER DOCUMENTS (Includ	ling Author, Title, Date,	Pertinent Pages, Etc.)		
1 Copy of the PCT Internat (PCT/US03/35922)	tional Search Report dated	1 April 28, 2004		
			· .	
EXAMINER	DATE CON	SIDERED 10/13/05		
7			© 2004 WW	



For	m PT	O-1449 Modified	1	Docket No. Application No. UPN-4296/P2957 10/706,799				
	List of Patent and Publications Cited by Applicant (Use several sheets if necessary)				Applicant Joel S. Karp, et al.			
U.S. Department of Commerce Patent and Trademark Office			Filing Date November 12, 2003	Group 3736	2878	,		
				Confirmation No. 7178				
, , 		U. S	S. PATENT	T DOCUMENTS				
Examiner Initial		Document No.	Date	Name		Class	Subclass	
CS	2	5,015,860	05/14/91	Moses		250	361	
Á	3	6,285,028 B1	09/04/01	Yamakawa	•	250	370.09	
B	4	2004/0017224 A1	01/29/04	Tumer, et al.		327	51	
	_	FORE	IGN PATI	ENT DOCUMENTS	,			
Examiner			D-4-	G			nslation NO	
<u>Initial</u>		Document No.	Date	Country		YES	NO	
···	 				<u> </u>			
•	-							
							-	
			_		 		-	
EN 4 3 5 7 3 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5	1			DATE CONSIDE	DED /	0/13/	15	
EXAMINE		X X		DATE CONSIDE	KED /	ا دران	,7	